

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/050,994
Applicant : Jim Hunter, et al.
Filed : January 22, 2002
Title : HIGH CONTRAST GRATING LIGHT VALVE

Confirmation No. : 2175
Art Unit : 2872
Examiner : Alessandro V. AMARI

Atty Docket No. : CYPR-0018-27CP2

DECLARATION UNDER 37 C.F.R. 1.131

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Sir:

We, Jim Hunter and David T. Amm do hereby declare and state that:

I. We are named co-inventors of the above-captioned patent application. Together, we, with Chris Gudeman and Akira Tomita developed the subject matter claimed in the above-captioned patent application while employees of Silicon Light Machine (SLM) a company acquired by Cypress Semiconductor Inc., subsequent to the development of the subject matter claimed after December, 1998.

2. As previously reflected in the Declaration of James A. Hunter dated July 25, 2005, filed in the above-captioned patent application, the grating light valve of the above-captioned patent application was made by us at Silicon Light Machine prior to December, 1998, and tested and shown to be suitable for use as a grating light valve, that is, able to alter reflective light b movement from conditions of constructive to destructive interference. Moreover, the grating light valve developed included, on the dielectric layer of the device, a conductive trace which allowed charge trapped at or in the dielectric layer to escape when the trapped charges are present in the surface of that dielectric layer. That Declaration inadvertently recites a date of prior to December, 1989. It should be corrected to read December, 1998.

3. Specifically, we, Hunter and Amm, together with Gudeman and Tomita, built and successfully tested a reflective light processing element comprising a substrate, a dielectric layer formed on the substrate, a conductive trace on the dielectric layer, which allows charges trapped in the dielectric layer to escape, and a plurality of ribbons formed above the substrate and the conductive trace. Each of the ribbons comprises a top surface that is reflective, and the reflective surfaces exhibit a given degree of reflectivity. The grating light valve developed included two sets of ribbons, each set having a given width but different from the width of the other set, which ribbon alternate in the device between sets, the sets of ribbons being configured to move relative to the other to constructive and destructive interference positions.

4. We have searched the records of Cypress Semiconductor Corp., and the records of Silicon Light Machine, for testing conducted prior to December, 1998, that reflect the successful modulation of reflected light by zero order grating light valves of the type recited. We are not able to identify any specific test, and test results, that can be specifically attributed to the device described

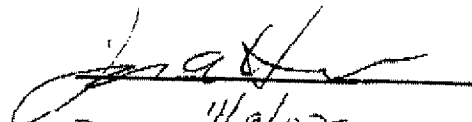
that were conducted prior to December, 1998. We are certain that such testing was conducted, but cannot positively attribute the testing conducted prior to December 1998 to any specific record.

5. Submitted herewith, as Exhibit A hereto, is a three page document which reflects the typical charging test that was conducted. The results reflected are attributable to the device described above, and may have been conducted prior to December, 1998, but there is no way to be certain. As shown by these test results, the device was shown to modulate light, in response to an applied voltage, charges in the dielectric layer that build up during operation, due to the application of an electric field between the two electrodes, are dissipated by the conductive trace. As reflected in the Declaration of James A. Hunter of July 25, 2005, the reflective light processing element, a grating light valve, described above was made by us at Silicon Light Machine prior to December 1, 1998. The device was tested to our satisfaction, the grating light valves shown to modulate the amount of light reflected down by them from a light source, under application of an electric field, and further shown to work as intended by dissipating any electric charge that would otherwise have been trapped in the dielectric through the conductive trace provided. Although the testing reflected in Exhibit A hereto cannot be described, by us, within a certainty to have occurred prior to December, 1998, it is reflective of the testing that did occur, as we recall, prior to December, 1998 at Silicon Light Machines.


6. Akira Tomita and Chris Gudeman are no longer employees of Silicon Light Machines or Cypress Semiconductor Corp. They were not available to join in this Declaration. Nonetheless, their records, as well as ours, and other records of Silicon Light Machines/Cypress Semiconductor Corp., were searched for dated documents reflecting testing, and no such documents were identified.

7. All statements made of our own knowledge herein are true, and all statements made and information believed by us are believed true. Further, we are aware that willful full statements and the like are punishable by fines, imprisonment, or both, 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of U.S. Patent Application 10/050,949 and any patent to issue thereon.

Jim A. Hunter


Date 4/9/07

David T. Amm


Date 4/9/07